

**REMARKS**

Applicants appreciate the Examiner's thorough consideration provided in the present application. Claims 1-4, 7-13, 15, 16 and 19-22 are currently pending in the instant application. Claims 1, 8, 13 and 15 have been amended. Claims 1, 8 and 13 are independent. Claims 5, 6, 14, 17 and 18 have been cancelled. Reconsideration of the present application is earnestly solicited.

**Reasons for Entry of Amendment**

As discussed in greater detail hereinafter, Applicants respectfully submit that the rejections under 35 U.S.C. § 103(a) are improper and should be withdrawn. Accordingly, the finality of the Final Office Action mailed on April 4, 2003 should be withdrawn.

If the Examiner persists in maintaining his rejections, Applicants submit that this Amendment was not presented at an earlier date in view of the fact that Applicants are responding to new grounds of rejection and the Examiner's use of Official Notice (and Applicants' repeated and seasoned traversals) in a Final Office Action. In accordance with the requirements of 37 CFR 1.116, Applicants respectfully request entry and consideration of the foregoing

amendments as they remove issues for appeal (claims are cancelled) and place the current application in a condition for allowance.

### **Claim Rejections Under 35 U.S.C. § 103**

Claims 1-19 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Ishihara (U.S. Patent No. 4,567,958) in view of Izumi (U.S. Patent No. 6,155,371). This rejection is respectfully traversed.

Applicants submit that the Examiner's alleged combination fails to teach each and every element of the claimed invention. Further, the Examiner has not provided a motivation to combine the references of the prior art that is either taught or suggested by the prior art of record. In addition, the Examiner has selectively extracted teachings from the prior art of record while ignoring the teachings of the references as a whole. This is clearly improper.

With respect to claim 1, the unique combination of elements of the claimed invention is not taught or suggested by the prior art of record. For example, prior art of record does not teach or suggest "A V-belt transmission comprising a crankshaft having a drive end, *wherein the crankshaft includes a plurality of molded crank pins formed integrally with the crankshaft; and a bolt securing said fixed pulley half to the end portion of the crankshaft, said bolt threadingly engaged with a female screw portion formed within an interior*

*portion of the end portion of the crankshaft, wherein an open edge of the end portion of the crankshaft with the female screw portion formed has a chamfered, tapered edge.”* (emphasis added) Accordingly, this rejection should be withdrawn.

With respect to claim 8, the unique combination of elements of the claimed invention is not taught or suggested by the prior art of record. For example, the prior art of record does not teach or suggest “A V-belt transmission comprising a crankshaft having a drive end, *wherein the crankshaft includes a plurality of molded crank pins formed integrally with the crankshaft; a bolt securing said fixed pulley half to the end portion of the crankshaft, said bolt threadingly engaged with a bolt hole formed within an interior portion of the end portion of the crankshaft, wherein an open edge of the end portion of the crankshaft has a chamfered, tapered edge.”* (emphasis added) Accordingly, this rejection should be withdrawn.

With respect to claim 13, the prior art of record fails to teach or suggest the unique combination of elements of the claimed invention, including the limitation(s) of “a V-belt transmission comprising a crankshaft having a drive end, *wherein the crankshaft includes a plurality of molded crank pins formed integrally with the crankshaft;* and a bolt securing said fixed pulley half to the end portion of the crankshaft, said bolt threadingly engaged with a bolt hole

formed within an interior portion of the end portion of the crankshaft, *wherein the bolt hole is formed in an end face of a left shaft portion of the crankshaft, the bolt hole having a depth of about half of a length of the left shaft portion*; and a left unthreaded portion, a central female thread portion, and a right unthreaded portion, *wherein an open edge of an end portion of the crankshaft with the female thread portion has a chamfered, tapered edge.*" (emphasis added) Accordingly, these rejections should be withdrawn.

In summary, none of the crankshafts shown by the references relied upon by the Examiner have crankshafts having a pulley secured with a bolt in a crankshaft bolt hole, e.g., internally threaded portion of the crankshaft. This feature is specifically incorporated into the claimed invention to overcome problems with the background art heretofore not identified by the prior art of record. Therefore, Applicants analysis of the problems associated with the background art, including identification of problems with designs such as Izumi and/or Ishihara, and the claimed solutions for these problems have not been taught or suggested by any reference in the prior art of record. Accordingly, this rejection should be withdrawn.

In the present application, the Examiner admits that Ishihara does NOT teach or suggest "a bolt securing said fixed pulley half to the end portion of the crankshaft, said bolt threadingly engaged with a bolt hole formed within an

interior portion of the end portion of the crankshaft.” In order to cure this deficiency, the Examiner relies upon Izumi. However, Izumi is directed toward the same type of arrangement that Applicants describe in the Background of the Invention. In short, none of the prior art of references teach or even remotely suggest a fixed pulley half being fixed to a crankshaft by a bolt.

As identified by the Examiner, Izumi merely shows the use of bolt to attach a pulley to a shaft. However, the Examiner assumes that this feature permits the Examiner to simply add this feature on to *any* shaft of a transmission. If Izumi stood for this broad teaching, why isn't this feature shown or described as being on any shaft of a transmission in either of the references? The answer is that the prior art of record fails to teach or suggest this broad teaching. In fact, Izumi unquestionably shows the exact opposite of what the Examiner alleges the reference teaches. A bolt is specifically not used to secure the pulley to a crankshaft.

Applicants challenge that the Examiner is specifically ignoring that Izumi clearly shows an exterior threaded crankshaft having a fixed pulley attached by a nut. Clearly, Izumi, just like Ishihara, shows the crankshaft specifically having a pulley secured by a nut to a threaded crankshaft. The same configuration that the claimed invention is purposefully trying to avoid. Even if Izumi allegedly teaches that it would have been well known to form a bolt hole

on a shaft, this feature is not described or shown with respect to the crankshaft in Izumi and/or Ishihara. The Examiner simply ignores this distinction and will not address this issue in any of the responses to date.

Applicants respectfully submit that the Examiner is merely demonstrating that Izumi clearly teaches against the alleged modification (by actually showing the opposite configuration). In fact, Applicants submit that the Examiner is forced to carefully word the rejection to ignore the configuration shown in FIGs. 4 and 5 of Izumi. This is improper and prima facie evidence of a reference teaching against an alleged combination of the prior art of record.

The Examiner is required to look at the reference for what it teaches (and does not teach) to one of ordinary skill in the art, e.g., a nut attached to an externally threaded crankshaft to secure a pulley. Instead, the Examiner has not provided any reason in the record as to why one of ordinary skill in the art, without the benefit of Applicants own specification, would modify Izumi and/or Ishihara in a manner neither taught or suggested by these references.

When the Examiner is forced to disregard features of the invention to "make the rejection work," Applicants submit that this type of practice is improper. Clearly, if the Examiner looks at the entirety of FIG. 4 and 5, e.g, the portion that has a crankshaft already shown in it), the Examiner will

appreciate that the reference clearly “teaches against” the alleged modification. If the reference itself teaches against the modification, the Examiner cannot simply ignore this distinction and make the modification anyway under the allegation that it would have been obvious to do so.

The Examiner is relying upon a reference to allegedly teach that which it explicitly avoids in the very same figure. Izumi was obviously aware of the ability to secure a pulley half to a rotating shaft via a bolt. However, it is clear from FIG. 4 that Izumi did not see any reason to secure the pulley halves on the driving end of the transmission, e.g., the crankshaft, with a bolt in the manner as the claimed invention. If the reference itself chooses to ignore the possibility of securing the pulley half to the end of the crankshaft in this manner, it would appear that Izumi did not believe that there was any art-recognized problem with this type of arrangement.

Since Ishihara, Izumi and the Examiner have not shown that there was any art-recognized problem with the prior art devices, the Examiner has not shown why would one of ordinary skill in the art attempt to modify the Izumi structure. The Examiner has simply shown that the prior art of record could have been modified to read on the claimed invention. However, the prior art of record does not suggest a single reason, e.g, there is no evidence in the record of the present application, that this modification would have been desirable

and/or suggested by the prior art. Accordingly, this rejection should be withdrawn.

With respect to claims 20-22, the subject matter of these claims is clearly shown or described in the original written description in FIGs. 4 and 5 of the present application and the specification, e.g., at paragraphs 0064-0068. Since the crank pins are formed integrally with the crankshaft, e.g., without a crankshaft journal, the longitudinal size of the crankshaft can be reduced and the machinability can be improved.

In accordance with the above discussion of the patents relied upon by the Examiner, Applicants respectfully submit that these documents, either in combination together or standing alone, fail to teach or suggest the invention as is set forth by the claims of the instant application.

As to the dependent claims, Applicants respectfully submit that these claims are allowable due to their dependence upon an allowable independent claim, as well as for additional limitations provided by these claims.

### **Alleged Lack of Seasonable Challenge to “Official Notice”**

With respect to claim 6 and 18, the Examiner alleges that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a chamfer on the outer edge of the bolt hole as it is old and



well known in the art to provide a chamfer on a bolt hole to provide a thread alignment.” This use of Official Notice (the Examiner has acknowledged for the first time in four office actions that Official Notice is actually being taken) is traversed.

In the claimed invention, the chamfered portions of the crankshaft are used as centering holes for supporting the crankshaft at both ends of the shaft. Accordingly, a sufficient support area can be ensured and machining accuracy and productivity can be enhanced/improved. In the background art, including Izumi and Ishihara, a pulley is secured to a crankshaft with a nut, e.g, the crankshaft itself is threaded on the exterior. Accordingly, the overall diameter of the crankshaft is decreased with respect to the claimed invention.

With respect to claims 6 and 18, the Examiner has not utilized any references to support or advance the Examiner’s opinions. The Examiner has failed to show the structural elements and/or provided any motivation based on the prior art of record that would support this conclusion. Accordingly, Applicants request that the Examiner properly respond and augment the record of the present application as outlined in section 2144.03 of the MPEP, e.g., provide proof of both the missing structural elements existing in the prior art of record and a reason or motivation in the reference as to why these

missing features would have been added to the alleged combination of the prior art of record.

Applicants submit that the Examiner's alleged use of Official Notice has only been articulated in the record once by the Examiner, i.e., in this Final Office Action. In order for Applicants to "seasonably challenge" the Examiner's use of Official Notice, the Applicants have to be informed that this judicially-created doctrine is actually being relied upon by the Examiner. The Examiner will note that the only use of the term "Official Notice" ever appearing in any of the Examiner's Office Actions is in the April 4, 2003 Final Office Action.

A careful review of the Office Actions sent by the Examiner will also show that the Examiner has improperly used "Official Notice" during the prosecution of the present application. For example, the Examiner states that Applicants failed to seasonably challenge the Examiner's use of Official Notice in the December 28, 2001, Office Action. However, the Examiner merely states "Regarding claims 6 and 18, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a chamfer on the outer edge of the bolt hole as it is old and well known in the art to provide a chamfer on a bolt to provide proper thread alignment." (see page 3 of the December 28, 2001 Office Action) Applicants had no way of determining whether this statement by the Examiner was based on either the Ishihara and/or Izumi reference or

whether it was simply the Examiner's opinion about the state of the art. Accordingly, Applicants labeled this portion of the rejection as "Informal Official Notice" in the March 15, 2002 response.

Even a cursory review of section 2144.03 of the MPEP would reveal that if Official Notice is taken by the Examiner, it must be clearly communicated to Applicants. Accordingly, Applicants described this practice by the Examiner as Informal Official Notice and traversed it in the March 15, 2002 response. However, the Examiner has refused to provide any evidence to support his opinions about the state of the prior art, let alone inform Applicants that Official Notice was actually being relied upon in the present application.

The Examiner is reminded that "It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known." Further, "It is never appropriate to rely solely on "common knowledge" in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based." (See MPEP § 2144.03A)

In the present case, with respect to claims 6 and 18, the Examiner has relied upon alleged common knowledge to teach BOTH the missing structure of the alleged combination of Ishihara in view of Izumi AND the motivation to add

this structure to the alleged combination of Ishihara in view of Izumi. This is clearly improper.

Even if the Examiner felt that Official Notice had been properly taken in the first office action, the Examiner was then required to state in the next Office Action (see MPEP § 2144.03C) that “the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner’s assertion of official notice or that the traverse was inadequate.” However, in the Office Action issued May 14, 2002, there was no mention of the use of the Examiner’s Official Notice or such a statement as is required by MPEP § 2144.03C.

Accordingly, Applicants traversed this Informal Official Notice once again in the response filed on August 14, 2002, e.g., Applicants explicitly traverse the apparent use of Official Notice again in the Reasons for Entry of Amendment. However, it is still unclear from the record whether or not Official Notice had ever been taken by the Examiner.

On October 30, 2002, the Examiner again ignored these statements by Applicants and did not address the issues raised with respect to claims 6 and 18 and the Examiner’s apparent use of Official Notice, e.g., no references to support the Examiner’s conclusions were ever provided. Applicants submit that this is improper use of Official Notice and that the Examiner has not

followed the steps “judiciously” as is required by the MPEP § 2144.03. Applicants submit that it would have been a rather simple courtesy for the Examiner to at least let Applicants know whether or not the Examiner was in fact relying upon Official Notice with respect to claims 6 and 18.

Unfortunately, the Examiner’s first use of the term “Official Notice” appears in a Final Office Action, e.g., after four office actions have been issued by the Examiner and only to let Applicants know that they have failed to “seasonably challenge.” Applicants submit that this practice is unreasonable and clearly fails to provide Applicants with any way of responding to the Examiner’s grounds of rejection. If the Examiner persists in maintaining this rejection without providing evidentiary support for the Examiner’s opinions about the prior art of record, Applicants respectfully request the courtesies of a personal interview with the Examiner and his supervisor.

### **CONCLUSION**

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but rather to merely show the state-of-the-art, no further comments are necessary with respect thereto.

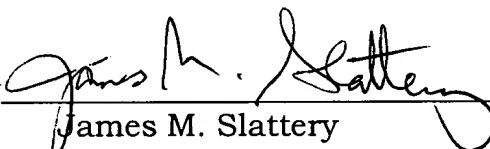
Docket No. 0505-081P  
Appl. No.: 09/826,862  
Art Group Unit 3682

In the event there are any matters remaining in this application, the Examiner is invited to contact Mr. Matthew T. Shanley, Registration No. 47,074 at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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